

# *10G 850nm VCSEL single and array chips*

## *RC0850-010MA-S(A)*

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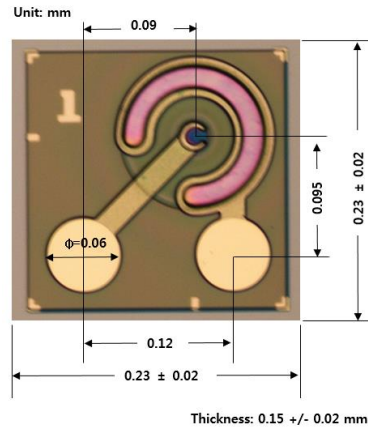
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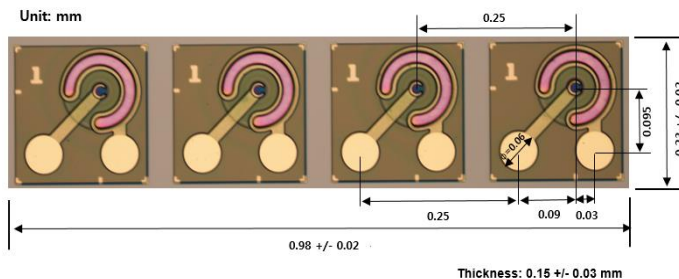
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# 1. Specifications

## RC0850-010MA-S



## RC0850-010MA-A



## Electrical and optical characteristics

(T = 25°C unless otherwise stated)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Note
Output power	$P_o$	1.5	1.8		mW	I = 6 mA
Threshold current	$I_{th}$		0.8	1.5	mA	
Operation voltage	$V_o$		2.1	2.3	V	I = 6 mA
Series resistance	$R_s$		50	70	$\Omega$	I = 6 mA
Beam divergence	$\theta$		28	35	degree	FW at 1/e <sup>2</sup> I = 6 mA
Wavelength	$\lambda$	840	850	860	nm	I = 6 mA
Spectral width	$\Delta\lambda$			0.65	nm	I = 6 mA
Slope efficiency	$\eta_d$	0.20			mW/mA	
Peak temperature dependence	$\Delta I/\Delta T$		0.06		nm/°C	T = 0 to 70°C
3dB bandwidth	GHz	9	11			I = 6 mA

## Absolute maximum ratings

(T = 25°C unless otherwise stated)

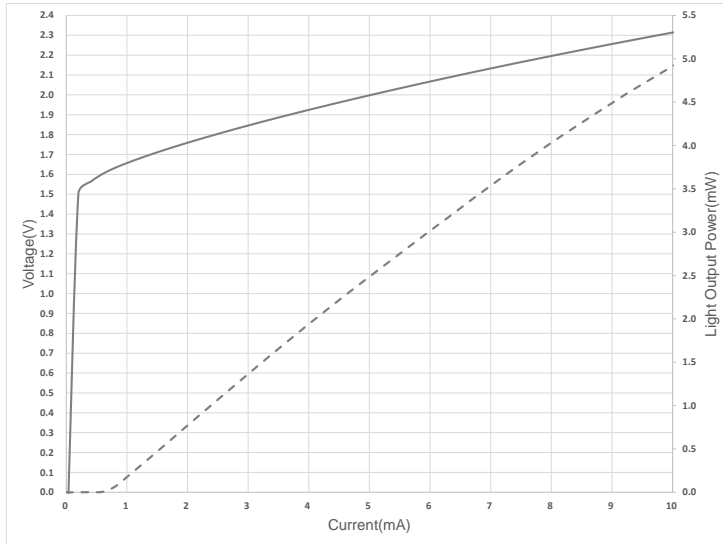
Parameter	Symbol	Rating	Unit	Notes
Forward current (Ta=25°C)	$I_f$	12	mA	
Reverse voltage	$V_r$	5	V	
Operating temperature range	$T_{op}$	0 ~ 80	°C	
Storage temperature	$T_{stg}$	-40 ~ 100	°C	
Reflow temperature	$T_{ref}$	260	°C	Max. 10sec 2mm from case

## Notice

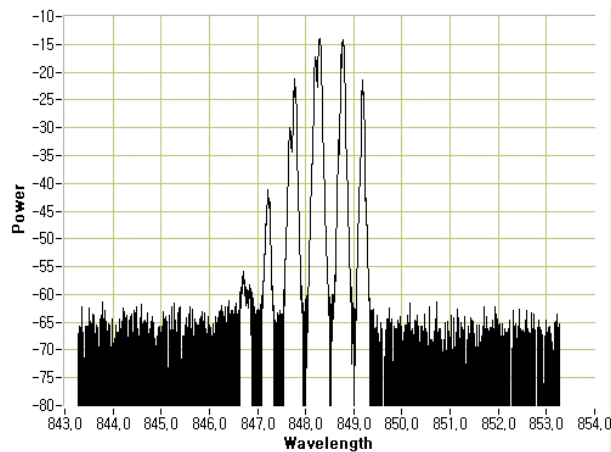
Conditions exceeding those listed may cause permanent damage to the device. Devices subjected to conditions beyond the limits specified for extended periods of time may adversely affect reliability.

## 2. L-I-V & Spectrum

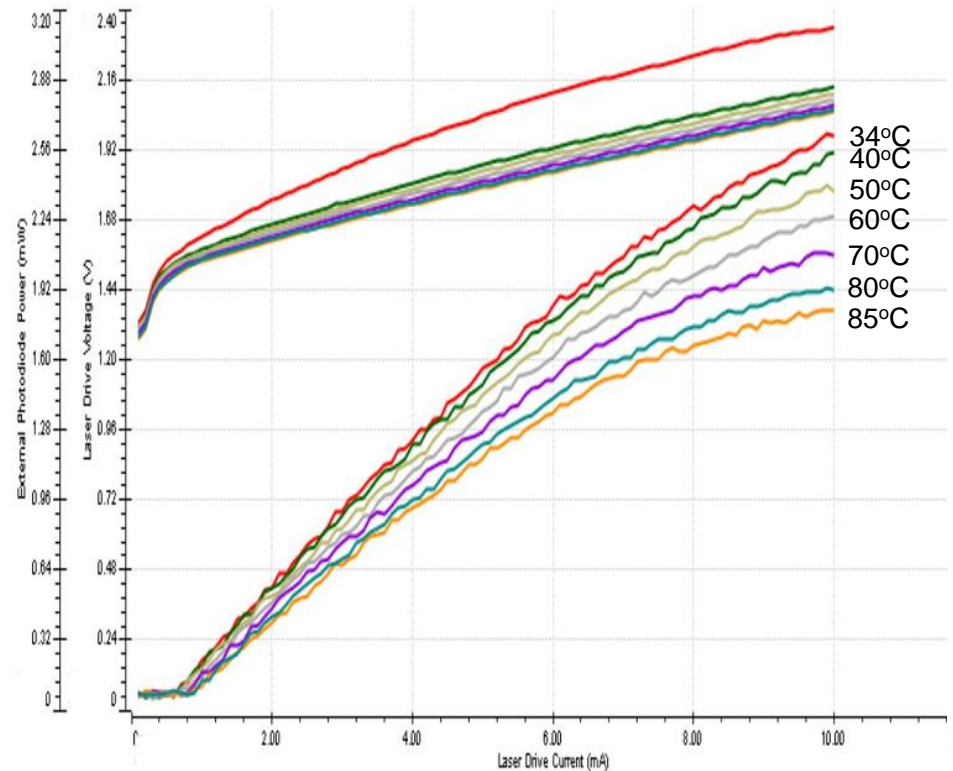
L-I-V at 25°C



Spectrum at 25°C, 6mA

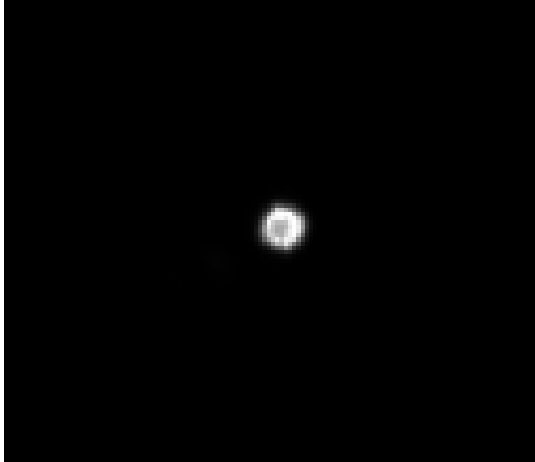


L-I-V-T

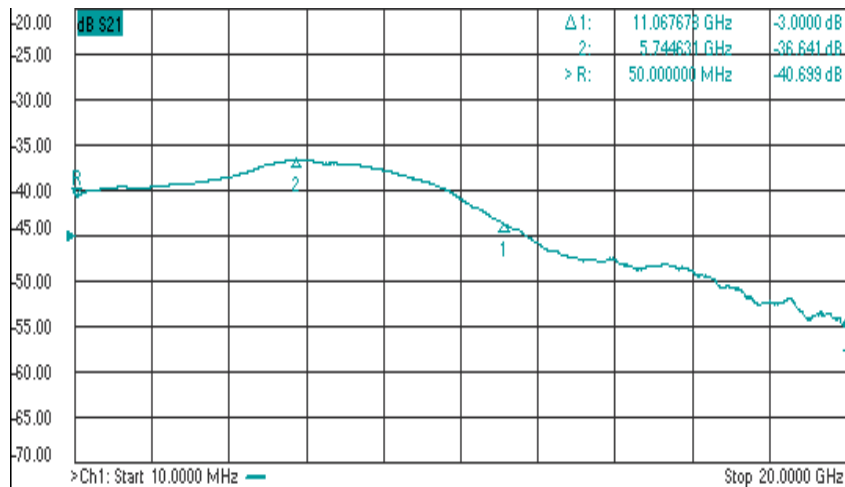


# 3. Near-field, $f_{3dB}$ , Eye pattern

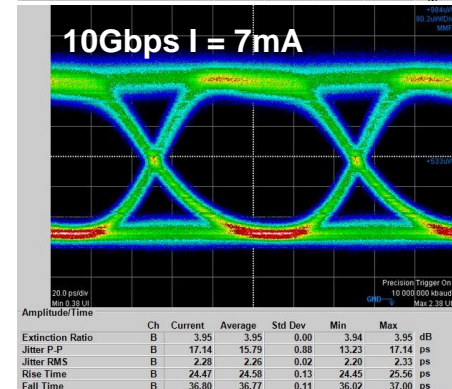
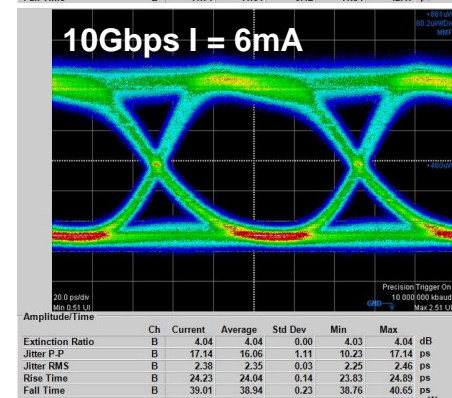
Near-field at 6mA



$f_{3dB}$  at 6mA (25°C)



Eye pattern





**THANK YOU!**

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